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Rapid analytic review: Labour and birth companionship in a pandemic

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Rapid Analytic Review: Labour and Birth Companionship in a pandemic

***Companionship of choice for asymptomatic childbearing women in hospital
throughout labour and birth***

27th April 2020

Compiled by the RCM Professorial Advisory Group

Led by Lavender T and Downe S with Renfrew M, Spiby H, Dykes F, Cheyne H, Page L, Sandall J, Hunter B

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This very rapid review was conducted for the RCM as part of a series of COVID-19 related reviews. Key findings and considerations for practice are provided from page 3 onwards. Appendix one provides more details on the search strategy and findings.

NB. Information is being published frequently, thus this review will need updating regularly.

Background

Labour companionship is defined as '*support provided to a woman during labour and childbirth*' (Bohren et al. 2017). In line with the principles of the general social support literature (Vaux 1988), Bohren (2019) has categorised labour companionship as follows:

- a. Provision of *informational support* about childbirth, acting as a liaison between health workers and women, and facilitating non-pharmacological pain relief.
- b. *Advocacy*, speaking up in support of the woman.
- c. Provision of *practical support*, including encouraging women to mobilise, providing massage, and holding her hand.
- d. Provision of *emotional support*, using positive language to praise and reassure, helping the woman to feel in control and confident, and providing a continuous physical presence.

The 'companion' may be a partner, relative, friend, doula or healthcare worker. Labour companionship has been recognised as a key component of respectful maternal and newborn care and included by the World Health Organisation, in their recommendations on intrapartum care for a positive childbirth experience (WHO, 2018). This is because companionship has a positive effect on birth outcomes, including an increase in spontaneous vaginal births, shortened labours, reduction in interventions (including caesarean sections) and improved maternal experience (Bohren et al. 2017; Weeks et al. 2017).

This very rapid scoping review relates to companionship throughout labour in hospital by a companion of choice, for women who are asymptomatic/screen negative for COVID-19. The term 'birth companion' is used with this main focus. The report therefore does not include support provided by midwives and other care providers, or continuity of care schemes, or the particular precautions that might be needed for women known to be COVID-19 positive.

The COVID-19 pandemic creates a challenge to birth companionship in hospital. This is due to the potential for viral spread and the need for social distancing. This has led to widespread restrictions on visitors in all parts of hospitals. It also reduces the ability of midwives to use therapeutic touch, and raises concerns about extra people coming into hospitals. It is also a time when midwifery staffing levels are low, so midwives may be unable to provide one-to-one labour care, and continuity of midwifery care schemes may be suspended.

Even in these circumstances, there is professional agreement (RCOG, 2020; RCM 2020, WHO 2020, ICM, 2020) that women's human rights and the evidence base should be upheld, including access to a companion of choice. Indeed, in times of heightened anxiety, uncertainty, and fear, and when midwifery support may be reduced, it is arguably even more important. The key recommendation from all current guidance, and from the current review, can be summarised as:

An individual, asymptomatic birth companion should be enabled to stay with the woman throughout labour, birth and immediate postnatal period.

Despite this strong recommendation, from professional bodies in the UK and around the world, there are anecdotal reports that some women are currently labouring alone in hospital for all or part of their labour and birth, in the UK and elsewhere (Birthrights 2020, Kale 2020, Koons 2020, Wilson et al. 2020). These reports include accounts of birth companions being limited to just attending for the actual birth of the baby, or being asked to wait outside the hospital, until the woman is deemed to be in active labour, or even on the point of giving birth. This is not consistent with the definitions of labour companionship described above and raises issues about what companionship by the partner of choice is actually for.

This review addresses the overall issue of **how can birth companionship in hospital for asymptomatic women be optimised/tailored in a pandemic, such as COVID-19?**

The key question was divided into two sub-issues:

1. *At what point(s) in labour/birth should birth companionship in hospital for asymptomatic women be supported during the covid-19 pandemic?*
2. *How should labour/ birth companionship in hospital for asymptomatic women be supported during the covid-19 pandemic?*

The recommendations related to this issue were derived from five linked reviews/analyses. The methods can be seen in Appendix 1, with key findings highlighted below. Of note is the paucity of evidence related to companionship of choice in a pandemic. Therefore, some of the recommendations stated are drawn from the broader literature related to the mechanisms of social support, alongside relevant statements from national and international organisations and opinions of maternity experts. As for all the rapid reviews undertaken in this review series, we were also guided by the following key principles:

- Continue to provide evidence-based, equitable, safe, compassionate and respectful care for physical and mental health, wherever and whenever care takes place, by remote access if necessary
- Protect the human rights of women and newborn infants, unless and only unless the public health imperative makes this impossible
- Ensure strict hygiene measures and social distancing when possible
- Ensure birth companionship
- Prevent unnecessary interventions
- Do not separate mother and newborn infant unless absolutely necessary
- Promote and support breastfeeding
- Protect and support staff, including their mental health needs

A. Summary messages (references and evidence are provided in the Appendix)

At what point(s) in labour/birth should birth companionship in hospital for asymptomatic women be supported during the COVID-19 pandemic?

- 1. *Women want their birth companion of choice with them throughout the whole labour and birth episode (including labour induction and elective caesarean section).*** Indirect evidence also suggests that this is likely to be associated with the optimum psychological, emotional, and neuro-physiological effects, both during labour and birth, and in the postnatal period

How should labour/birth companionship in hospital for asymptomatic women be supported during the COVID19 pandemic?

- 2. *Minimise the risk of cross-infection:***
 - a. A single, asymptomatic birth companion, who is not self-isolating through contact with other symptomatic individuals, should accompany the woman.
 - b. Checklist 'screening' of birth companions is recommended
 - c. The companion should stay with the woman throughout labour and birth, without leaving the labour room/moving around the hospital
 - d. Infection control measures and the use of personal protective equipment (PPE) need to be fully explained to women and their companions, and, where needed, made available to them.
 - e. Admit the woman to the hospital as late in labour as is clinically, psychologically and emotionally safe for her and her baby
- 3. *The birth companion should be chosen by the woman*** and could include a partner, relative, friend or doula
- 4. *Services should be organised so that birth companionship also benefits staff*** and, where staff need to provide more intensive support to women without birth companionship, this should be accommodated where at all possible, and the potential extra stress of this for the supporting staff member should be recognised and mitigated by the ward team/organisation
- 5. *Birth companions need to be prepared for their role in the weeks before birth.*** This can be done by signposting them to currently available on-line resources/peer support.
- 6. *Women in late pregnancy should be advised to have a back-up plan*** in case their chosen birth companion is unavailable/symptomatic
- 7. *Support services for traumatic birth should include birth companions.*** Traumatic birth can affect birth companions as well as childbearing women.

B. Summary findings and considerations from the five linked reviews

1. How does birth companion of choice affect physiology in labour and birth?

Key findings and areas for consideration:

Longer term social support has been associated with *improvements in cardiovascular, immune function, anti-inflammatory and neuroendocrine responses, and, particularly, in higher levels of oxytocin production* (Uchino 2006). This effect was *particularly evident in studies of 'warm partner' support* (Grewen et al 2003, 2005, Light et al 2005). One study also suggests *an effect of birth companion emotions on maternal perception of pain during and after elective caesarean section* (Keogh et al 2006)

In relation to companionship and pain, Lopez-Sola et al (2019) showed that when women held the hand of a romantic partner, as opposed to an inert object, their *perception of thermal pain was reduced*, and this effect was correlated with observation of pain-perception related brain activity, using MRI scans.

The single directly relevant study in this area (Lindow et al 1998), was a small (n=16) RCT that allocated unaccompanied women to one hour of support versus no support. There was no effect on oxytocin production, *suggesting that short-term companionship may not trigger beneficial physiological effects*.

2. What impact does companionship during labour and birth have on parental/infant bonding and family relationship?

Key findings and areas for consideration:

Where the birth companion is also the child's parent, *a positive experience of the labour can strengthen and reinforce the couple/parent/child relationship in the longer term* (Sweeney and O'Connell 2015). Perinatal social support also predicts positive outcomes for women (Emmanuel et al 2012)

However, *couple, parent, and child relationship can be unaffected or even disrupted if birth companions perceive the birth (vaginal or CS) to be traumatic, or feel that they are not equipped to cope/support the woman, or if there are other complex socio-demographic factors at play* (Greenhalgh et al 2000, Keogh et al 2006, Figueiredo et al 2009; Nicholls & Ayres 2007)

3. What is important to women related to companionship?

Key findings and possible implications for practice

1. Many women expect to have continuous support from their chosen birth companion throughout labour and perceive it to be an important component of care provision

(Downe et al. 2018). Reduced staffing, birth companion restrictions and individual anxieties during COVID-19 make it even more important to achieve this.

2. *Women value choosing their own birth companion*; this is likely to result in a positive childbirth experience (Kabakian-Khasholian & Portela 2017). Whilst recognising and respecting why limitations may be necessary, some women will undoubtedly be disappointed that their pre-COVID-19 plans may not be realised, particularly related to number of birth companions and those whose partner is in isolation. Innovative ways of maintaining regular communication, through mobile technology is important. Women themselves may have innovative solutions to this problem, and these should be accommodated where they are feasible
3. *Women want a birth companion who is compassionate and trustworthy* (Bohren et al. 2019).

4. How can birth companions be supported to meet women's and their own needs?

Key findings and possible implications for practice

1. *The birth companion chosen by the woman (and their backup, in case they become COVID-19 positive) needs to know that the following may be helpful for women during labour* (Bohren 2019);
 - a. Information about childbirth, acting as a liaison between health workers and women, and facilitating non-pharmacological pain relief.
 - b. advocacy, speaking up in support of the woman.
 - c. practical support, including encouraging women to mobilise, providing massage, and holding her hand.
 - d. emotional support: using positive language to praise and reassure, helping her to feel in control and confident, and providing a continuous physical presence.
2. *They should be helped to prepare for their role* by discussing the needs above with the woman, and offered relevant education, guidance, and useful tips and skills. Where possible, this should be tailored to, and undertaken with, the individual woman, in the antenatal period, in order to meet her expectations (Kabakian-Khasholian and Portela 2017). It is anticipated that the chosen birth partner will be living with the woman and practising social distancing, so education sessions could be delivered to both of them together through remote means. If they are not together, remote delivery could still take place simultaneously. This might include:
 - a. simple illustrations (visual, audio, infographics) of what labour looks and sounds like, and what women's behavioural cues are
 - b. simple on-line vlogs showing how to massage and how to offer words of support
 - c. links to peer support – other birth companions who have recently accompanied their partner and who are willing to talk it over online or on the phone

3. *Some partners find it emotionally challenging to observe their partner in labour and birth* and may not cope well (Bohren et al. 2019). Such anxiety is likely to be heightened during COVID-19 due to fears for the woman and baby's wellbeing, restrictions on personal movement and lack of face to face familial support. This is further compounded by the impact of seeing staff in PPE. The use of remote technologies/virtual links through social media to family and peer support mechanisms at certain points in the labour is likely to be helpful. Additionally, companions could be prepared for health providers' appearance whilst wearing PPE, using digital images.

5a. How can health care providers be assisted to support birth companions?

Key findings and possible implications for practice

1. *Some healthcare providers have concerns regarding birth companions* influencing labour ward activities (Kabakian-Khasholian and Portela 2017). During a pandemic, a labour and birth companion may not be viewed as a priority by some health care providers, who are fearful for their own and the woman's safety and are providing care to women in a challenging environment. Health care managers should acknowledge this concern, and work with the specific fears of health care providers to ensure that they feel safe supporting birth companionship.
2. *Ensure there are visible labour ward policies, guidance, and mechanisms that support the integration of birth companions into the labour ward, and that are adapted to account for concerns and issues about COVID-19* (Bohren, 2019); these should be available and visible, using clear dissemination formats such as posters and infographics. Based on the experience of some Trusts and Boards during COVID-19, this could also include enabling policies for women to be safely supported in early labour outside of the hospital setting (including during induction and the latent phase) and birth through:
 - a. setting up video links with midwives during latent phase labour, so that women can stay at home with their birth companion until they are in the active phase (Spiby et al. 2007; 2008).
 - b. In some areas this has included using alongside MLUs or repurposing hotels close to hospitals for latent phase labour/ labour induction
 - c. ensuring women undergoing induction/who are in all stages of labour are in part of the hospital that is physically separate from, and staffed separately to, areas with COVID-19 patients, so that birth companions can stay throughout (including separate entrances and exits, where possible)
 - d. if necessary, requiring birth companions to use the appropriate level of PPE to guard against asymptomatic transmission to staff
3. *Health providers are conscious of the impact that full personal protective equipment (PPE) has on women and their companions* (Wilson et al. 2020). Some ways of ensuring human connection when wearing PPE have been reported in the popular press and

have included innovations such as attaching personal portrait photographs onto the front of gowns to show the person 'behind the mask', 'smiling with your eyes' and using calm and reassuring voice tones (RCM, 2020).

5b. How can healthcare providers best support women in the absence of a birth companion?

Key findings and possible implications for practice

1. *In the absence of a birth companion, health providers may be the woman's only physically present support person* (Wilson et al. 2020), adding additional stress to an already challenging situation. Given the pause in some areas on continuity of carer schemes, many women will not know their midwife in advance of labour, adding to their anxiety. In this situation health providers should:
 - a. Try to prioritise time with women in this situation where possible
 - b. Discuss the difficulties, and realistic expectations of contact during the early phases of labour with them
 - c. Encourage and where possible enable them to communicate with external supporters remotely to maintain social support
 - d. Ensure that the woman is aware of how to call for assistance, and feels that it is ok to do so, should she need help when alone
 - e. Work with colleagues to enable breaks where at all possible
 - f. Identify their own peer support person, or Professional Midwifery Advocate (or supervisor in Scotland or Wales) to enable personal debriefing when this is possible to do, if it has been difficult to undertake support for a woman in this position

Conclusion

Companionship of choice is a human right which is relevant throughout the childbirth continuum and which has important outcomes. Every effort should be made to ensure this is facilitated during a pandemic. Labour companionship is not just an observation of a birth, but a dynamic process that is needed throughout the labour and birth, to optimise positive outcomes. It is about social support in all its components. This social support has measurable short and long term biological and clinical effects and outcomes. To be effective, **women need to have birth companionship throughout labour and birth in all settings (including during the latent phase of labour, and induction).**

COVID-19 will undoubtedly increase the anxiety of many birth companions, due to fears for the wellbeing of the woman and baby, limitations of their own support network, unfamiliar environments (when hospital tours have been cancelled, for instance), and workforce restrictions. Birth companions need to be prepared for this role, while minimising risk of infection to woman, partner, baby, and staff. Video tours of hospitals, on-line birth preparedness sessions, remote contact with others who have had positive experiences, and positive social media narratives may be helpful. The implications for staff must also be acknowledged and addressed. Ultimately, the long-term physical, emotional, psychological and social benefits of well supported companionship during hospital birth need to be taken

fully into account when plans are made to minimise infection risk for women, companions, neonates and staff during COVID-19.

Appendix 1:

Methods and description of studies:

Appendix 1 Methods and description of studies:

This was a very rapid scoping exercise exploring womens', companions' and health providers' needs in a pandemic. Of note is that this is not a review of the impact of companionship on

clinical outcomes; this is already well established. It is much less clear how this happens, and at what stage of labour, and, therefore, at what stage companionship of choice is best commenced. We aimed to use the existing evidence to inform principles of good practice aimed at supporting women and companions at this unprecedented time.

For all questions, searches were conducted using a range of keywords across databases including PubMed and the Cochrane Library, searching by Title and Abstract. No language or date restrictions were applied. Research papers using any methodology and methods were included. Searches were run in April 2020.

Questions 1 and 2

1. How does birth companion of choice affect physiology in labour?

Methods

To address this question, we used the following search terms (title, abstract) in Pubmed: *Companionship AND (labour OR birth) AND physiology*

We did not impose any language, method, or date restrictions. We only included studies in humans, and research studies.

Findings

Our search did not locate any papers directly of relevance. We therefore broadened our analysis to social support and health in general, based on an authoritative review in the field. (Uchino 2006). Reference chasing from this paper identified one study that was directly of relevance to this question (Lindow et al 1998). In this RCT, women without a birth companion were allocated randomly to one hour of support or to no support, and their oxytocin levels were assessed before and after the intervention/control period. No differences were seen in oxytocin levels.

In contrast, the large body of general social support and health literature reviewed by Uchino and colleagues shows strong associations with social support and a range of physiological effects. The authors defined social support as *'the structures of an individual's social life (for example, group memberships or existence of familial ties) and the more explicit functions they may serve.'* (p 378). The review found effects on physical (particularly cardiovascular health, neuroendocrine systems, and immune function and inflammatory response) and psychological/behavioural aspects (see table one).

Most included studies related to long-term social support, suggesting that these benefits come with trust and familiarity. Of particular relevance to labour and birth is the comment that social support was *'uniformly associated with higher oxytocin levels'*.

The review included three studies by the same group that looked at range of studies of physical (sometimes termed 'warm') partner contact, including hugs and hand holding, that showed relationships with lower blood pressure, higher levels of oxytocin (Light et al 2005; Grewen et al 2003; Grewen et al 2005). One author (Grewen 2003) concludes that *'These*

findings suggest that affectionate relationships with a supportive partner may contribute to lower reactivity to stressful life events).

Table one: Mechanisms of effect of social support (Uchino 2006)

Area of effect	Mechanisms of effect identified by the review	Author comments/specific studies cited
<i>Physical health</i>	Behavioural (rule reinforcing): exercise, proper nutrition, not smoking, adherence to medical regimes	Can also be rule-breaking: encouraging negative or risky behaviours
<i>Psychological health</i>	impact on situation appraisals, emotions, moods	These two are interlinked, and may be reciprocal with social support
<i>Cardiovascular</i>	Buffer for stress-induced cardiac reactivity; lower blood pressure reactivity to acute psychological stressor; lower resting blood pressure; lower ambulatory blood pressure; reduces underlying atherosclerosis (in women at high risk) and slower disease progression for women with coronary artery disease	<i>'when the role of being a parent was combined with high levels of functional support it predicted the greatest evening reduction in ambulatory blood pressure....'</i> (Grewen et al 2005)
<i>Neuroendocrine</i>	Lower catecholamine levels; lower cortisol levels;	Perceptions of partner support <i>uniformly associated with higher oxytocin levels'</i> (Grewen et al 2005)
<i>Immune function/inflammation</i>	Enhanced natural killer cell activity; enhanced helper T cell numbers; higher seroconversion levels following vaccination(hep b) more likely to mount antibodies, and less likely to develop the common cold following inoculation Lower levels of cytokines (interleukin-6) in some studies, but higher levels (interleukin 1 and 6) and faster wound healing in others, under different clinical conditions	Re the cytokine data – it is important to consider the disease context and time course (acute vs chronic) in interpreting the cytokine results

One relevant study (Lopez-Sola et al. 2019) was generated by the searches run for question two. In relation to companionship and pain, this study showed that when women held the hand of a romantic partner, as opposed to an inert object, their perception of thermal pain was reduced, and this effect was correlated with observation of pain-perception related brain activity, using MRI scans.

1b How does birth companionship influence the physiology and psychology of labour and birth?

Methods

To address this question, we used the following search terms (title, abstract) in Pubmed:

Companion OR partner OR 'labour support' AND

Labour OR childbirth OR intrapartum OR intranatal OR confinement AND

Physiol\$ OR psychol\$ OR mechanism OR progress

We did not impose any language, method, or date restrictions. We only included studies in humans, and research studies.

Findings

The search generated 26 hits. Only one was directly focused on companionship in labour (Lindow et al 1998). As noted above, this was an RCT that randomised unsupported women to one hour with a supportive companion, or to remaining without a companion for that hour. Sixteen women with uncomplicated singleton pregnancies, in the active first stage of labour, were included. Oxytocin levels were assayed for 16 min before and after the support or control period. No differences were found.

Interpretation

Based on the theories of social support outlined above, this is probably not surprising, given the short time of allocation of social support and the fact that the women (presumably) knew that it would be withdrawn after a period of time. This study is unlikely to mirror the impact of birth companionship by a chosen companion throughout labour and birth. It does suggest that minimal social support in labour is not likely to be beneficial.

2. What impact does companionship during labour and birth have on parental/infant bonding and family relationship?

Methods

To address this question, we undertook used the following search terms (title, abstract) in Pubmed:

Companion OR partner OR 'labour support' AND
Labour OR childbirth OR intrapartum OR intranatal OR confinement AND
Bonding OR relationship

We did not impose any language, method, or date restrictions. We only included studies in humans, and research studies

Findings

The search generated 163 hits. 5 studies were relevant, or partially relevant, to the question

The studies are summarised in table two.

Table two: *Studies related to companionship during labour and birth and parental/infant bonding and/or family relationship*
(aspects of relevance to this review highlighted)

Study	Focus	Method	Sample	Selected relevant findings
Sweeney 2015	Fathers' experience of planned home birth	Hermeneutic phenomenology	eight fathers, recent home birth	Themes identified were 'negotiating the decision', 'ownership of the birth' and 'changed way of being'. Fathers overcame their initial reservations about home birth before the decision to plan a home birth was agreed. They were actively involved with their partner in labour which gave themselves a sense of ownership of the experience and a valued post-birth intimacy. Their belief in natural birth was reaffirmed and the experience gave them a new perspective on life.
Greenhalgh 2000	Fathers' coping style, antenatal preparation, and experiences of labour and the postpartum	Quantitative questionnaire survey	78 fathers completed several questionnaires, some within six days of childbirth and others at 6 weeks postpartum.	Fathers' reports of fulfilment and delight while attending childbirth were negatively related to their level of depressive symptomatology at 6 weeks postpartum. Fathers whose children were born by caesarean delivery used significantly more negative adjectives to describe their baby at 6 weeks postpartum compared with those born by vaginal delivery. More married fathers attended antenatal classes and reported lower levels of depressive symptomatology than unmarried fathers. <i>Authors say: The way in which men experience childbirth may have some influence on their subsequent emotional well-being.</i>
Emmanuel 2012	Relationship between social support and quality of life in	Longitudinal survey	Four hundred seventy-three (473) women recruited at 36 weeks of	Social support was found to be a significant and consistent predictor of higher HRQoL scores, particularly in the physical domain at

	childbearing women during the perinatal period	Short Form-12 (SF-12) Version 2 Health Survey was used to measure the mental and physical domains of HRQoL. Social support was measured using the Maternal Social Support Scale (MSSS).	pregnancy, and six and 12 weeks following childbirth	<p>12 weeks following childbirth and mental domain during the perinatal period. The relationship between social support and HRQoL was found to be independent of other factors including education, length of relationship with partner, age, parity, and antenatal visit....</p> <p><i>Authors say: Social support is a significant and consistent predictor of a mother's HRQoL during the perinatal period</i></p> <p><i>NB – not clear how much of this support was during labour and birth</i></p>
Figueiredo 2009	Mother-to-infant emotional involvement at birth	Survey including The Bonding Scale (an extended Portuguese version of the 'New Mother-to-Infant Bonding Scale') and the EPDS	315 women, first days after birth in one Portuguese hospital	<p>A worse emotional involvement with the newborn was observed when the mother was unemployed, unmarried, had less than grade 9, previous obstetrical/psychological problems or was depressed, as well as when the infant was female, had neonatal problems or was admitted in the intensive care unit. Lower total bonding results were significantly predicted when the mother was depressed and had a lower educational level; being depressed, unemployed and single predicted more negative emotions toward the infant as well. No significant differences in the mother-to-infant emotional involvement were obtained for events related to childbirth, such as type of delivery, pain and partner support, or early experiences with the newborn; these events do not predict mother's bonding results either.</p>
Nicholls 2007	Childbirth-related post-traumatic stress disorder in couples	Qualitative interview study	Six couples, where at least one partner had clinically significant	<p>Analysis identified four themes with 18 subthemes as follows: (1) birth factors (pain, negative emotions in labour, perceived lack</p>

			<p>symptoms of childbirth-related PTSD.</p>	<p>of control, lack of choice or lack of involvement in decision-making, restricted movement or physical restraint, and expectations not being met); (2) quality of care (information provision, staff factors, continuity of care and environment); (3) effects on relationship with partner (impact on physical relationship, communication within the relationship, negative emotions within the relationship, receiving or giving support from partner, coping together as a couple and overall effect on the relationship); and (4) effects on relationship with child (perceptions of the child and parent-baby bond).</p> <p><i>NB – some evidence in the main paper that mutual support and getting through the hard times was associated with a positive sense of closeness for some couples in the longer term</i></p>
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One paper generated by the search was not directly relevant to the issue of companionship and longer term relationship/bonding, but it suggests that partner support during elective CS is also important, but that partners need to be properly prepared, to mitigate the negative effects of high levels of their fear. (Keogh et al 2006). In this study, 65 women who had a CS under regional anaesthesia, and their accompanying partners, were included. Quantitative psychosocial data were collected at three time points for the mothers, before, during the caesarean section and after delivery on the postnatal ward; and at two time points for the birth partners (before and during the caesarean section). The finding relevant for this review was that birth partner's fear mediated between maternal fear and postoperative pain. The authors conclude that *Maternal fear during caesarean section not only fluctuates, but may be influenced by psychosocial factors, including their birth partner. Psychosocial factors were also important predictors of postoperative experiences. Interventions that appropriately manage psychological and social factors during caesarean delivery may facilitate a more positive experience for mothers.*

A subsequent search using elective caesarean AND birth partner generated 15 hits, none of which addressed birth companionship and bonding or relationship, but some of which emphasise the need for partner preparedness. This issue could be explored further in a future review.

Questions 3 to 5

To search the **Cochrane Library** the terms 'Companion' AND 'Birth' were used. This revealed 5 reviews, of which 2 had relevance (Bohren et al. 2017; 2019, Table 4), although none were directly related to a pandemic.

The **PubMed** initial scoping search used the terms (Child)birth OR Labour (NOT work) AND Companion, which yielded 59 papers. When combined with terms relevant to a Pandemic (see table 3), only 1 paper was revealed. The 1 paper identified (also identified in Cochrane Review) was related to fear of infection being introduced by companions, as opposed to entering an infectious environment. This paper, by Bohren et al. (2019), has been reported in table 4.

Table 3. Summary of PubMed search

PubMed		
#1	Childbirth OR Labour	47594
#2	Companion*	13017
#1 & #2 combined	Childbirth OR Labour AND Companion*	65
	Childbirth OR Labour AND Companion* NOT Work	59

	Childbirth AND Companion* AND Pandemic OR Virus OR Disease Outbreak OR Infection	1
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The 59 papers were rapidly reviewed for relevance to the review question, described below.

Description of papers

Papers were published between 1986 and 2020; all were reported in English. A large proportion of papers (n=31) were reporting studies in low-income countries, which were either proposing companionship as an intervention as part of a quality of care programme or were exploring the barriers and facilitators to implementation. Some of these studies (n=7) directly explored the relationship between disrespect and birth companionship.

Seven reviews were identified in the search; 4 qualitative synthesis, 2 quantitative and 1 mixed-methods. The qualitative reviews focussed on labour companionship (Bohren et al. 2019), what matters to women (Downe et al. 2018), maternity waiting homes (Loveday et al. 2017) and pain relief (Thomson et al. 2019). The quantitative reviews focussed on non-pharmacological methods of pain relief (Smith et al. 2018) and continuous support during childbirth (Bohren et al. 2017). The mixed-methods review focussed on factors implementing companion of choice (Kabakian-Khaholian and Portela, 2017). The reviews by Bohren et al (2017; 2019) and Kabakian-Khaholian and Portela (2017) provided the most useful evidence to inform this rapid review.

Table 4. Relevant papers from Cochrane and PubMed search

Author and Year	Title	Study Type	Sample and Setting	Results
Bohren et al. 2019	Perceptions and experiences of labour companionship: a qualitative evidence synthesis	Qualitative Review	51 studies (52 papers) mostly from High Income countries	<p>Birth companions support women in 4 ways</p> <ol style="list-style-type: none"> 1. Give informational support 2. Act as advocates 3. Provide practical support 4. Give emotional support <p>Women need a birth companion to be compassionate and trustworthy.</p> <p>Companionship helped women to have a positive birth experience</p> <p>Women had mixed views about having a male partner present</p> <p>Male companions believed their presence to have a positive</p>

				<p>impact on themselves and on their relationship with their partner and baby</p> <p>Some men found it difficult to cope with seeing their partner in pain</p> <p>Some male partners felt excluded from decision-making</p> <p>Women having doulas valued building a rapport before birth.</p> <p>Foreign-born women in high-income settings appreciated support from community-based doulas to receive culturally-competent care.</p> <p>Implementation of birth companions is effected by the lack of awareness of its benefits (women and health providers); lack of space and privacy; and fearing increased risk of infection.</p> <p>Policies and training to support practice were important.</p> <p>Lay companions were often not integrated into antenatal care.</p>
Bohren et al. 2017	Continuous support for women during childbirth	Review of RCT's and quasi-experimental studies	26 trials 15,858 women 13 in high income & 13 in middle-income settings.	<p>Continuous support in labour improves outcomes women and newborns:</p> <ul style="list-style-type: none"> -increased spontaneous vaginal birth -shorter duration of labour -decreased caesarean birth -decreased instrumental vaginal birth -decreased use of any analgesia -decreased use of regional analgesia -decreased low 5min Apgar score -reduction in negative feelings about childbirth experiences.

				<p>There is no evidence of adverse outcomes related to continuous support.</p> <p>Continuous support from someone with training, who is not part of the woman's social network, and whose role is just to support the woman in labour, appears beneficial.</p> <p>Having a family member or friend is better than having no companion, increasing women's satisfaction.</p>
Kabakian-Khaholian and Portela (2017)	Companion of choice at birth: factors affecting implementation	Review of studies regardless of methodology	31 studies identified from the Cochrane Library (RCT's or quasi-experiments); 10 qualitative studies. Combination of HIC and LIC	<p>Relevant findings:</p> <p>Women their families appreciated the continuous presence of a person to provide support during childbirth.</p> <p>Health workers had concerns about interference from companions but also were aware that their presence could relieve pressure on staff, during shortages.</p> <p>Companionship needs to be considered in the context of organization of care and the physical environment.</p> <p>Policies on companionship can be helpful.</p> <p>Providers views related to companionship are important.</p>

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